



NET ZERO ENERGY

BURLINGTON VERMONT



About Burlington Electric Department (BED)

- Burlington's municipal electric utility
 - Public Power since 1905
 - 118 employees, including the McNeil Generating Station
 - Third-largest electric utility in Vermont
- 21,000+ customers
 - 17,282 residential, 3,983 commercial and industrial
 - 5,500-6,000 residential accounts turn over each year
- Electricity facts:
 - Summer peak: ~65 MW; Annual energy Use: ~330,000 MWH
 - McNeil is the largest energy producer in Vermont with Vermont Yankee Retirement
 - 100% of power from renewable generation as of 2014
 - No rate increase from 2009-2021; statewide average retail price of electricity increased approximately 21% during that time





BED Revenue Bond Basics

- Authorized under City Charter § 3-421 and General Bond Resolution adopted by Board of Electric Commissioners in 1981
- Requires approval of a majority of Burlington voters
- Payable solely from BED rates and revenues, not City General Fund or property taxes
- An obligation only of BED, not of the City (does not affect City's debt ratio or policy)
- BED has used issued revenue bonds several times since 1981 – for McNeil Generating Station construction, initial Energy Efficiency funding, AMI/Smart Grid infrastructure, purchasing Winooski One hydroelectric facility, and other purposes





Net Zero Energy Revenue Bond Concept

- **Builds on Prior Energy Efficiency Bond** – BED's \$11.3 million revenue bond for energy efficiency in 1990 jumpstarted our energy efficiency investments. Net Zero Energy Revenue Bond continues that foundational investment strategy.
- **Permits Additional Progress Toward Net Zero Energy Goal** – The proposed revenue bond frees up BED's GO Bonds to permit increased investment in customer incentives to accelerate progress toward Burlington 2030 Net Zero Energy goal.
- **Supports Investment in BED Infrastructure** – The Revenue Bond would also fund upgrades, maintenance and continued reliability of BED distribution system and grid, technology systems, and renewable energy plants in a manner that is fiscally responsible for ratepayers. Some of the infrastructure support is needed for upgrades to serve increasing loads from electrification.



Photo credit Drive Electric VT





\$20 Million Net Zero Energy Revenue Bond Proposal

- **Grid Investments:** reliability and Net Zero Energy system upgrade projects
- **Technology System Investments:** replace aging software, enable new dynamic rate and load control options
- **Renewable Generation:** maintain existing renewable plants, convert GT to run on biodiesel instead of oil
- **Net Zero Energy Capital Investments:** new EV charging stations, demand response technologies





BED Net Zero Energy Revenue Bond Proposal – Funding Breakdown By Category

Net Zero Revenue Bond Projects	FY22	FY23	FY24	FY25	Total
Generation	\$ 277,604	\$ 869,730	\$ 375,000	\$ 1,320,000	\$ 2,842,334
Distribution	\$ 1,093,910	\$ 3,478,948	\$ 6,000,478	\$ 3,530,624	\$ 14,103,959
General Plant		\$ 574,900	\$ 150,000		\$ 724,900
IT	\$ 1,067,874	\$ 1,811,556	\$ 1,043,308	\$ 50,000	\$ 3,972,738
Other-Demand Response, Charging Infrastructure	\$ 191,756	\$ 212,023	\$ 250,220	\$ 305,757	\$ 959,756
Total	\$ 2,631,144	\$ 6,947,157	\$ 7,819,006	\$ 2,603,190	\$ 20,000,498

*FY25 projects include full year funding, although the revenue bond would run through only half of FY25, which is why the project category totals for that year, if added up, are double the \$2,603,190 figure represented in the FY25 total line.



Double Strategic Electrification (Tier 3) Incentive Funding FY23-25

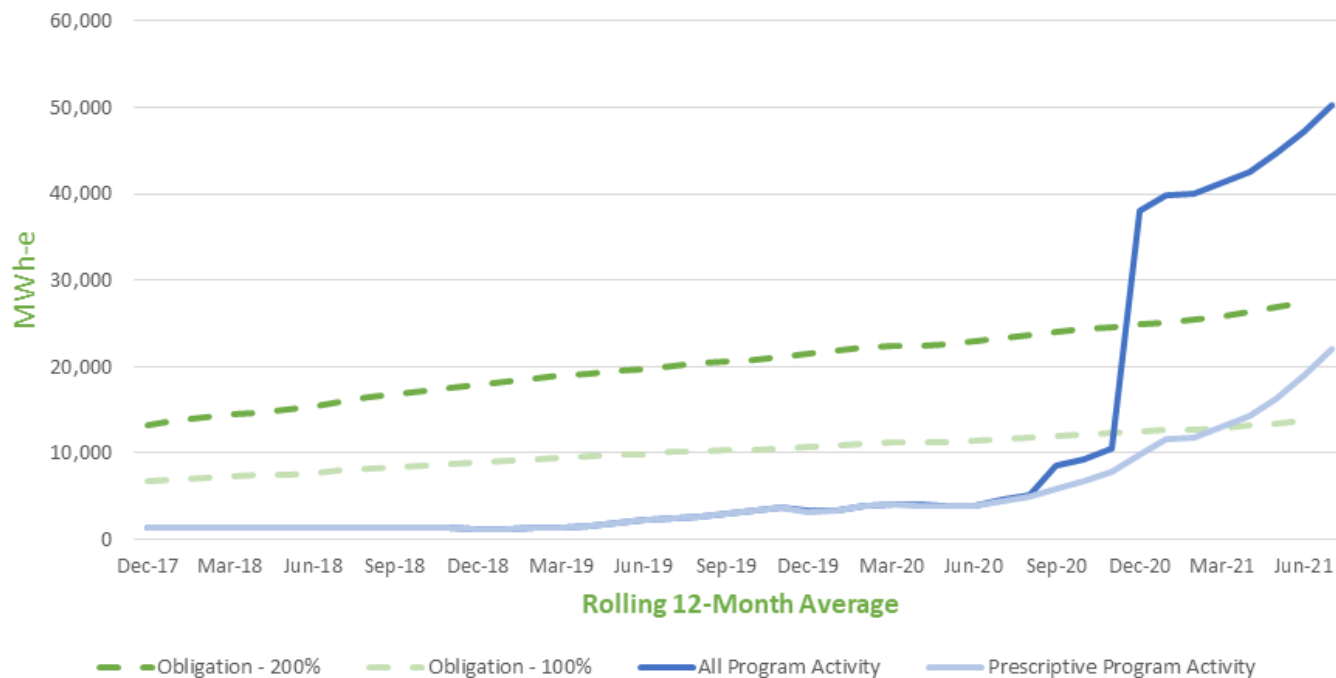
- **Continue Green Stimulus** – Per PUC Order BED can keep Green Stimulus level incentives for heat pumps, EVs, through at least end of 2023.
- **Support Faster Progress Toward Net Zero Energy Goal** – Funding for adoption rate double state Renewable Energy Standard compliance level. Incremental GHG reduction beyond business as usual of 47,000 tons lifetime, equivalent to nearly 100,000 barrels of oil consumed.
- **Use a Portion of Existing BED GO-Backed Annual Bonds** – Projected \$5.3 million of investment during this three-year period. The projects that these GO bond funds would normally be applied to have been included in the revenue bond proposal.





Tier 3 Program Activity Vs RES Obligation

Rolling 12 Months Ending





FY23 Projected Rate Pressure to Reach 110 Days Cash On Hand

(assuming full funding of capital projects and Net Zero Energy initiatives)

Financing Option	Projected Rate Pressure FY23
Without Revenue Bond	+23.7%
With Revenue Bond	+4.9%



Existing Revenue Bond Debt Service Schedule

In terms of existing revenue bond debt service, BED's 2014B revenue bond, which has had average annual debt service payments of \$684,000, will mature in 2025.

Current Ten Year BED Revenue Bond Debt Service (without new \$20 million Net Zero Energy Revenue Bond)

Fiscal Year	Principal	Interest	Total Payment
2021	\$1,745,000	\$846,033	\$2,591,033
2022	\$1,810,000	\$784,164	\$2,594,164
2023	\$1,850,000	\$723,984	\$2,573,984
2024	\$1,935,000	\$655,429	\$2,590,429
2025	\$2,000,000	\$575,046	\$2,575,046
2026	\$1,395,000	\$505,926	\$1,900,926
2027	\$1,445,000	\$450,719	\$1,895,719
2028	\$1,505,000	\$394,789	\$1,899,789
2029	\$1,565,000	\$335,354	\$1,900,354
2030	\$1,620,000	\$272,504	\$1,892,504
2031	\$1,685,000	\$205,180	\$1,890,180
	\$18,555,000	\$5,749,128	\$24,304,128



Net Zero Energy Revenue Bond Debt Service Schedule

\$20 Million Net Zero Energy Revenue Bond Pro Forma Debt Service Schedule for Next Ten Years

Fiscal Year	Principal*	Interest**	Total Payment
2022	\$0	\$0	\$0
2023	\$0	\$418,333	\$418,333
2024	\$0	\$502,000	\$502,000
2025	\$0	\$502,000	\$502,000
2026	\$0	\$502,000	\$502,000
2027	\$0	\$502,000	\$502,000
2028	\$1,114,518	\$488,013	\$1,602,530
2029	\$1,142,492	\$459,687	\$1,602,179
2030	\$1,171,169	\$430,651	\$1,601,819
2031	\$1,200,565	\$400,886	\$1,601,451
5-Year Total	\$4,628,743	\$4,205,570	\$8,834,313

* Principal payments would be deferred for 5 years.

** Assumes interest rate of 2.51%. Actual interest rate to be determined upon bond issuance.



Debt Service Capacity

- **Maturity Savings:** \$684,000 of existing Revenue Bond annual debt service will mature starting in 2026. That capacity is available to support principal repayment on Net Zero Energy Revenue Bonds.
- **Strategic Electrification Revenue Return:** BED projects average incremental net revenues of \$467,000 FY25-32 from the doubling of customer incentives from FY23-25.
- Total net revenues from strategic electrification projects FY23-25 will support approx. 40% of the combined debt service on the portion of the GO Bonds used for electrification and the Net Zero Energy Revenue Bonds.